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MEMORANDUM

VIA E-MAIL

TO: Chris Saporita

FROM: Kevin Young
Beth Morss

RE: Norlite—Confirmation of October 20, 2016 meeting

DATE: October 28, 2016

This memorandum summarizes discussions at the meeting between representatives of the U.S. Environmental Protection Agency (EPA) and Norlite LLC (Norlite) held at EPA Region 2's offices at 290 Broadway, New York City, concerning EPA's Administrative Compliance Order CAA-02-2016-1004 and the July 13, 2016 Performance Test Waiver application submitted by Norlite. A list of attendees is attached.

EPA's POSITION

After introductions, Hans Buenning summarized the results of his review of Norlite's waiver application. Per Hans, he reviewed the waiver application and consulted with program and enforcement staff in both the air and hazardous waste programs including staff in Washington and in the regional offices. Based on that review, he reached the following conclusions:

(1) He noted that the two kilns are not completely identical (the tubes have a different manufacturer and slight difference in length). He characterized the differences as "minor"; he did not indicate that the differences impacted emissions; and he emphasized that the physical differences were not sufficient, by themselves, to deny the waiver.

(2) After discussing this issue with various EPA staff, he indicated that under 40 CFR 63.7(h) "the margin of compliance" that meets the "significant" threshold should be 50% or more. He acknowledged that in 2003, EPA had approved Norlite's waiver request to use the test results for Kiln 2 for Kiln 1, stating in a June, 2003 letter as follows: "EPA approves this request as long as testing is performed on Kiln 2 and that emissions from Kiln 2 are at least 25% below all applicable standards. … The 25% margin will give Agency the confidence to assure that the emissions from the untested kiln also will be below standards. On a parameter by parameter basis, if Kiln 2 meets emission standards, but is not 25% below that standard, those emissions must be measured in Kiln 1 within 60 days of receipt of the CPT report by Norlite from its contractor."

(3) the pollutants of concern are mercury (69.58%), dioxins/furans (64.35%) and hydrogen chloride/chlorine (HCl/Cl2) (52.28%) based on the results of the most recent CPT for Kiln 2.

(4) He also compared the last two CPT test results (2011 and 2015) to each other. Assuming the operating parameters were similar during both tests, he compared the emission results between the two tests and found some of the parameters not to be well correlated. He stressed that he did not know what other factors may affect the emission results and whether those factors were the same in both tests.

NORLITE'S RESPONSE:

Norlite (through Kevin Young and William Morris) noted that Norlite submitted the "MACT Comprehensive Performance Test Plan Lightweight Kiln 1 and 2 (Revised June 29, 2015)" to DEC. That protocol stated and/or requested that the emission results and resulting OPLs would apply to both kilns consistent with prior tests campaigns. On July 9, 2015, DEC issued Notice of Approval of the CPT plan for Norlite Corporation and required Norlite to publish notice in the Albany Times Union and to provide for a 60 day public review. Robert Buettner of EPA Region 2 was copied on that notice. The test protocol had been developed by Norlite in consultation with DEC with the understanding that the "significant" threshold for the waiver was 25%. The testing protocol was developed to provide Norlite with an operating parameter window that was sufficiently robust to minimize automatic waste fuel cutoffs ("WFCOs"). Based upon DEC's direction, Norlite had been diligently working on developing tools to minimize WFCOs. In the testing protocol, Norlite evaluated three conditions; the most aggressive condition was Condition 3. The emissions results from Condition 3 were the only emission results that contain parameters that exceeded a compliance threshold of 50%. If Norlite and DEC had been aware that EPA had changed its position and doubled the margin of compliance, they might have revised the testing protocol to establish less aggressive operating conditions under Condition 3.

Norlite also stressed that 40 CFR 63.7(h) specifically states that as part of the waiver determination the "**delegated agency** … determines that the margin of compliance … is significant and can be maintained on an ongoing basis." In this situation, DEC and Norlite followed the requirements of the Clean Air Act in reviewing and approving the testing protocol and in the issuance of the Title V permit. Under its Title V permit, Norlite is required to comply with all operating requirements specified in the notification of compliance for both Kiln 1 and Kiln 2. In order to modify the terms and conditions of the Title V permit, Norlite would have to apply for a permit modification or the Department would have to commence a Department-

initiated permit modification subject to the procedures in 6 NYCRR Part 621. Norlite questioned how EPA could retroactively modify a DEC regulatory determination that was statutorily delegated to DEC (the delegated agency) especially since EPA was on notice of DEC's determination and failed to provide comment and since DEC's regulatory determination established the operating parameters contained in the facility's Title V permit.

Bill Morris briefly discussed the transition of the facility from the RCRA to the NESHAP program as well as the process of developing the stack testing protocol with DEC. He also provided a brief overview of facility operations, noting that that unlike a hazardous waste incinerator, Norlite is producing a product. This fact severely limits the facility's ability to go outside its operating envelope. Norlite must achieve a particular heat profile in order to produce high quality lightweight aggregate. Prince Knight provided a brief overview of the facility's hazardous waste management activities/sources. Kevin Young also provided a brief history of the development air pollution controls at the Norlite facility, noting that the units/controls were specifically designed to be identical in order to allow the facility to operate under a single set of operating parameters. At EPA's request, Bill Morris also provided a brief overview of the facility's lightweight aggregate manufacturing and hazardous waste management activities from a revenue perspective.

With respect to the waiver application, Bill Morris:

(1) Emphasized the importance of maintaining a single set of operating limits for both kilns (very important to minimize the potential for human error).

(2) Noted that DEC and Norlite had developed the stack test protocol on the assumption that, under the waiver, they were subject to a margin of compliance of 25% rather than 50% and that the test would have been designed differently had they known that the margin of compliance had changed.

(3) Noted that the 2011 and 2015 tests were not designed to allow side-by-side comparison of stack test results. The operation of the kiln and the air pollution control system is effected by the weather and other conditions (temperature, humidity, negative air pressure, etc). With respect to EPA's attempt to compare the results, Bill noted that it was important to look only at runs under truly comparable test conditions. Hans did not disagree, admitting that the comparison has its flaws.

(4) Emphasized that the 2011 and 2015 tests were designed to achieve different goals. The most recent test was designed in consultation with DEC to provide an operating window with sufficient flexibility to help minimize automatic waste feed cutoffs (WFCOs), a particular concern of both Norlite and DEC.

Bill Morris also noted that mercury emissions are almost exclusively a function of feed and that Norlite carefully limits mercury inputs, primarily because they pose a major problem from a wastewater treatment/discharge perspective. Bill Morris also noted that the emission rates of the three parameters in question were totally a function of the emission control system (and not the minor length differential between the two steel tubes) and that the emission control systems had been specifically and intentionally designed to be the same so that both kilns would have the same set of operating parameters.

PLAN OF ACTION

Following the discussion, the parties agreed on the following plan of action.

(1) Bill Morris and Hans Buenning will discuss development of a test protocol for mercury and HCl/Cl2 to confirm that Kiln 1 is in compliance with the applicable emission limits for these parameters. The additional testing would be done as soon as practical once a protocol was approved.
(2) Bill Morris and Hans Buenning will work together to develop a protocol for the upcoming confirmatory test on Kiln 1 (which addresses dioxins/furans only).
(3) The terms of the Order are stayed and will not take effect during these discussions and until such time as the conference is concluded.

Note that in the June 2003 letter, EPA stated as follows: "On a parameter by parameter basis, if Kiln 2 meets emission standards, but is not 25% below that standards, those emissions must be measured in Kiln 1 within 60 days of receipt of the CPT report by Norlite from its contractor." In the Plan of Action, Norlite is agreeing to measure the relevant parameters in Kiln 1 within an agreed upon time schedule even though the emissions were within the 25% threshold.

PROLOGUE

On October 26, 2016, Hans Buenning, Prince Knight and Bill Morris had a telephone call to discuss the protocol for the testing referenced above. The call started with a discussion of venturi scrubber pressure drop vs. stack gas flowrate topic since this issue is critical to any testing plan to be drafted. EPA's position is that Norlite is required to define OPLs for two different modes of operation, which represents a significant operational challenge for Norlite. This is based on a combination of EPA guidance and regulation that raises the issue of conflicting OPLs yet offers no solution. Bill Morris explained that the historical testing protocol does not represent two modes of operation; rather, it represents the normal operating envelope with a varying fan speed. Norlite's actual operating envelope is comfortably in the middle of the full operating range of the system and that the facility is well within compliance with the emission standards at both ends. There is no technical basis to suggest that emissions would be out of compliance under normal operation. Norlite explained that the "modes of operation" concept applies when the permittee is operating a piece of equipment in one scenario and not operating it in another (e.g., running two baghouse modules versus three). Keeping all OPL the same and varying fan speed is not a different mode of operation.

With regard to scheduling the future testing, Norlite explained MACT requires a confirmatory test be performed for dioxin/furans under normal operating conditions. The regulation expects the test to be performed no later than 31 months after a CPT; but it could be done as early as 18 months after a CPT. Norlite offered to have dioxin testing on Kiln 1 and Kiln 2 done in April or May of 2017. Norlite would agree to complete the testing on both kilns (preferably simultaneously over two days). This issue requires further discussion between the parties (including DEC, the delegated agency).

The testing for HCl/Cl_2 and mercury would be done in a separate test program at a different time. That testing could be performed over one or two days. The test protocol will need to approved by EPA, DEC and Norlite.

In order to proceed with preparing the test protocols, the parties need to resolve the test protocol issue (different mode of operations and one mode of operation with varying fan speed). From Norlite's perspective, the "different modes of operation" approach is inconsistent with the past testing programs, not practical, and would complicate operations at the facility. It would also fail to provide any improvement of already excellent emission rates. DEC (the delegated agency) is the agency that approves the CPT test protocol subject to a procedure set forth in the federal regulations and would have to be involved in any change from past practice.

Norlite will be presenting a "strawman" approach to EPA early next week that suggests a path forward to accomplishing the required testing. Norlite will also be researching the literature to support the establishment of an operating envelope with the CPT test conditions versus identifying different modes of operation. Norlite will also study the possibility of replacing the fixed throat venturi scrubbers with variable throat venturi scrubbers.

Attachment